Amendments to the Claims

Listing of Claims

Claim 1. **(Currently amended)**. A method for transmitting and receiving information, which provides the separation of the useful signal from the interference with low Bit Error Rate (BER) ~~independent from it's origin, i.e. whether the interference is orthogonal or non-orthogonal relatively to the useful signal~~, comprising: the unique address of the subscriber, also referred to hereinafter as "Unique Address Code" (UAC) (number of a subscriber) and the unique code used to encode the information "1" bits, also referred to hereinafter as "Encoded Information Group" (EIG), are assigned to each subscriber's device; the Unique Address Code (UAC) is represented as a binary code, the information is transmitted digitally, each information "1" bit is converted into an Encoded Information Group (EIG) of bits, the Encoded Information Group (EIG) is comprised of a sequence of regularly interchanging "1" and "0" bits with different durations, the number of a subscriber or Unique Address Code (UAC) and the Encoded Information Group (EIG) are unique for each particular subscriber; the Unique Address Code (UAC) signal is a pilot signal and is continually transmitted during the time interval while the actual information is transmitted; the Unique Address Code (UAC) and the actual information are transmitted on the same clock rate; and the information signal is placed in the Unique Address Code (UAC) and in the time intervals where the Unique Address Code bits have a "0" value.

Claim 2 **(Original).** The method as claimed in claim 1, to initiate a wireless communication, further comprising: the Unique Address Code (UAC) signals and information signals are both transformed to radio signals; and the Unique Address Code (UAC) signals and the information signals are transmitted on the same carrier frequency, various types of modulation PSK, FSK, ASK etc. may be applied.

Claim 3 **(Original).** The method as claimed in claim 1 for the simplex (one-way) operation comprising: all transmitter devices function in asynchronous transfer mode having the same bandwidth, a clock rate, a Unique Address Code (UAC) and a unique Encoded Information Group (EIG) are assigned to each transmitter device; and the unique Address Code (UAC) and the actual information are simultaneously transferred by all transmitter devices on the same carrier frequency (to initiate a wireless communication).

Claim 4 **(Original).** The method as claimed in claim 3 for receiving the information in the simplex operation, further comprising: the receiver device that receives the information is tuned-in to the Unique Address Code (UAC) as well as to the Encoded Information Group (EIG) of the corresponding transmitter device; the receiver device attempts to detect the Unique Address Code (UAC) of the corresponding transmitter device; the Number of Continuous Clock Rate Periods, also referred to hereinafter as

(NCCRP), of the Reference Signal, also referred to hereinafter as Reference Signal (RS), that continually match that of the incoming signal acts as criterion for address code detection, the Reference Signal (RS) is generated in the receiver device and acts as a copy of the Unique Address Code (UAC) of the transmitter device; and a match of the Reference Signal (RS) with the incoming signal is achieved if this match occurs with each of the "1" bits of the Reference Signal (RS), a match can either be perfect or imperfect, a perfect match is when the Reference Signal (RS) matches exactly the incoming signal by phase, an imperfect match is when there is a time delay between the two signals and where such delay is not greater than the duration of "1" bit of the Reference Signal (RS).

Claim 5 **(Original).** The method as it is described in claim 4, for detection of the Unique Address Code (UAC) of the corresponding transmitter device, further comprising: a Threshold Value of Matches, also referred to hereinafter as (TVM), is assigned to the Number of Continuous Clock Rate Periods (NCCRP); the Number of Continuous Clock Rate Periods (NCCRP), of the Reference Signal that match the incoming signal, is being measured; and when the measured value (as a number) of the Number of Continuous Clock Rate Periods (NCCRP) exceeds the assigned number of the Threshold Value of Matches (TVM), then the Reference Signal Generator (RSG) of the receiver device is synchronized with the Reference Signal Generator (RSG) of the transmitter device, synchronization is being performed by the Unique Address Code signal.

Claim 6 **(Original).** The method as it is described in claim 5, and the Reference Signal Generator (RSG) of the receiver device is synchronized with the Reference Signal Generator (RSG) of the transmitter device, further comprising: a channel (or in the case of a software driven apparatus, a software control code is executed) in the receiver device opens to receive and process the actual information; the useful signal is separated from interferences; the separation of the useful signal from impulse interferences and similarly from interferences caused by different transmitter devices, is achieved by measuring the relative changes (voltage hopping) of the level of the incoming signal at the starting and ending instances of "1" bits of the Encoded Information Group (EIG), i.e. as the Reference Signal Generator (RSG) of the receiver device and transmitter device are synchronized the receiver device knows at what instances the information bits ought to be, and by following the elevations and drops (Voltage Hops) that take place at the stat and end points of the "1" bits it finds the signal it needs; the separation of the useful signal from harmonic (such as sign, cosign etc. based signals) interferences is achieved by deducting the level of harmonic interferences from the incoming signal, the level (voltage) of harmonic interferences is detected in the instances of "0" bits of the Encoded Information Group (EIG), since as the RSG of the receiver device and the transmitter device are synchronized, the receiver device knows at what instances the "0" bits of Encoded Information Group (EIG) ought to be, in the instances of "0" bits of Encoded Information Group (EIG), the useful signal is constantly equal to zero; and consequently, the useful signal, separated from noise and interferences, enters the receiver's registering device.

Claim 7 **(Original).** The method as claimed in claim 1 a two-way wireless communication (duplex operation) between a base station and at subscriber unit or between two separate subscribers, further comprising: two frequencies such as f1 and f2, are supplied to transmit and receive information, all subscribers work on these two frequencies f1 and f2; under inactive status, all subscribers tune in and listen to detect their own Unique Address Codes (UAC)s and their unique Encoded Information Group (EIG) in the incoming signal; and a search, conducted on the same frequency, say, f1 attempts to detect the availability of its Unique Address Code (UAC) in the incoming signal.

Claim 8 **(Original)**. The method of a two-way communication as claimed in claim 7, further comprising: when subscriber A attempts to connect to subscriber B, then subscriber A switches over to the Unique Address Code (UAC) and the Encoded Information Group (EIG) of subscriber B; first, subscriber A operating on frequencies f1 and f2, attempts to detect the availability of the Unique Address Code (UAC) of subscriber B, if the Unique Address Code (UAC) is available, then subscriber B is considered to be busy; and while subscriber B is busy, the device of subscriber A deliberately blocks its own transmitter device and the receiver's registering device, to disable subscriber A from receiving information (which is not intended for subscribe A) from subscriber B, and similarly to not transmit information to subscriber B.

Claim 9 **(Original)**. The method for two-way communication as claimed in claim 8, further comprising: whenever subscriber B becomes free as detected by the absence of subscribe B's Unique Address Code (UAC), then subscriber A switches its own transmitter device over to frequency f1, and the receiver device to frequency f2; on the carrier frequency f1, subscriber A transmits the Unique Address Code (UAC) of subscriber B; when subscriber B detects its Unique Address Code (UAC), it opens a channel to receive (or in the case of a software driven apparatus a software control code is executed) the actual information; subscriber B synchronizes the Generator of the Reference Signal (RSG) of its own transmitter device and receiver device with the Reference Signal RSG of the transmitter device of subscriber A; simultaneously subscriber B tunes its transmitter device to the frequency f2 and transmits its Unique Address Code (UAC); and while detecting the Unique Address Code (UAC) of subscriber B, subscriber A's receiver device opens a channel to receive information, the Unique Address Code (UAC) of subscriber B, detected by subscriber A, implies that a direct communication between subscribers A and B is now possible and enabled, hence enabling the information exchange. (In duplex operation, the Unique Address Code (UAC) detection process and the separation of the useful signal from interferences and noise is achieved exactly in the same way as in simplex operation).

Claim 10 **(Original).** The method for transmitting and receiving information as claimed in claim 9, in the two-way communication (duplex operation) further comprising: in duplex operation, when subscriber A initiates the communications, the Reference Signal Generator (RSG) of both the transmitter and receiver devices of subscriber B is synchronized with the Reference Signal Generator (RSG) of the transmitter device of subscriber A, the Unique Address Code (UAC) signal received by subscriber A will time-delay behind the signal of the Reference Signal Generator (RSG) of Subscriber A's transmitter device, the amount of the time delay will depend on the physical distance between subscriber A and B, subscriber A measures the amount of the time delay of the received signal; the distance between subscribers A and B is computed from the amount of the time delay between the two signals; the speed that subscriber A moves relative to subscriber B is computed from the changes of the amount of the time delay between the two signals; the directional aerial (antenna) of subscriber A determines the direction of location of subscriber B; the coordinates of subscriber B's location are computed from the measured direction of location of subscriber B as well as from the amount of the time delay between the two signals; when subscriber B is in motion, then subscriber A is able to determine the distance, coordinates, trajectory and the speed at which subscriber B is moving relative to subscriber A, these properties are computed from the measured value of direction and amount of time delay between the two signals and also from the measured value of changes of the amount of the time delay between the two signals; and when the subscriber B is not moving, then subscriber A is able to determine its own location, coordinates, trajectory and speed.

Claim 11 **(Original).** The method for transmitting and receiving information as claimed in claim 8, further comprising: a strong interference is simultaneously and intentionally transferred along with the useful information, to maintain the security of the transmission, consequently preserving the confidentiality of the transferred information.

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